

WHAT IS CLAIMED IS:

1. A method of treating the effects of the genetic motor neuron disease
5 Spinal Muscular Atrophy (SMA) comprising:

administering a pharmacologically effective and physiologically acceptable amount of vitamin C and at least one ingredient selected from the group consisting of: flavonoid, pectin, enteric bacterium, enzyme supplement and any combinations
10 thereof; and optionally, a pharmaceutically acceptable carrier.

2. The method of claim 1, wherein said flavonoid is citrus flavonoid.

3. The method of claim 1, wherein said flavonoid comprises at least one
15 flavonoid ingredient selected from the group consisting of: rutin, hesperidin, naringin, naringenin 7-B rutinoside, flavonols, quercetin, flavones, phenolics, and any combinations thereof.

4. The method of claim 1, wherein said pectin is selected from the group
20 consisting of: citrus pectin, pomace pectin, and any combinations thereof.

5. The method of claim 1, wherein said pectin is apple pectin

6. The method of claim 1, wherein said enteric bacterium comprises at
25 least one bacterium selected from the group consisting of *Lactobacillus acidophilus*, *Bifidobacterium bifidum*, *Lactobacillus rhamnosus*, *Enterococcus faecium*, *Bifidobacterium adolescentis*, *Lactobacillus plantrum*, and any combinations thereof.

7. The method of claim 1, wherein said flavonoid is citrus flavonoid and said pectin is apple pectin.

5 8. The method of claim 1, wherein said at least one ingredient is flavoloid, pectin and enteric bacterium.

9. The method of claim 1, wherein said flavonoid is at least one citrus flavonoid selected from the group consisting of: rutin, hesperidin, naringin,
10 naringenin 7-B rutinoside, flavonols, flavones, phenolics, and any combinations thereof; said pectin is at least one pectin selected from the group consisting of citrus pectin, pomace pectin, and any combination thereof; and said enteric bacterium is at least one bacterium selected from the group consisting of *Lactobacillus acidophilus*, *Bifidobacterium bifidum*, *Lactobacillus rhamnosus*,
15 *Enterococcus faecium*, *Bifidobacterium adolescentis*, *Lactobacillus plantrum*, and any combinations thereof.

10. The method of claim 1, wherein said enzyme supplement is at least one enzyme selected from the group consisting of: amylase, protease, lactase,
20 cellulose, lipase, phytase, sucrase, maltase, and any combinations thereof

11. The method of claim 1, wherein said optional pharmaceutically acceptable carrier is a solid or liquid selected from the group of water, aqueous systems, alcohols, polyols, glycols, mineral oils, vegetable oils, excipient, binder
25 and any combinations thereof.

12. The method of claim 1, wherein said vitamin C, said at least one ingredient, and said optional pharmaceutically acceptable carrier are in a product form selected from the group consisting of an aerosol spray, pump spray, cream, emulsion, solid, liquid, dispersion, foam, gel and powder.

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13. A composition for the treatment of the effects of the genetic motor neuron disease Spinal Muscular Atrophy (SMA) in humans comprising:

vitamin C;

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at least two ingredients selected from the group consisting of: flavonoid, pectin, at least one enteric bacterium, enzyme supplement, and any combinations thereof; and

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an optional pharmaceutically acceptable carrier.

14. The composition of claim 13, wherein said vitamin C and said at least two ingredients are in pharmacologically and physiologically acceptable amounts sufficient to mitigate the symptoms of SMA.

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15. The composition of claim 13, wherein said flavonoid comprises at least one flavonoid selected from the group consisting of: rutin, hesperidin, quercetin, naringin, naringenin 7-B rutinoside, flavonols, flavones, phenolics, and any combinations thereof.

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16. The composition of claim 13, wherein said pectin is selected from the group of citrus pectin, pomace pectin, and any combinations thereof.

17. The composition of claim 13, wherein said pectin is apple pectin.

18. The composition of claim 13, wherein said optional pharmaceutically acceptable carrier is a solid or liquid selected from the group of water, aqueous systems, alcohols, polyols, glycols, mineral oils, vegetable oils, excipient, binder, powder and any combinations thereof.

19. The composition of claim 13, wherein said vitamin C, said at least one ingredient, and said optional pharmaceutically acceptable carrier are in a product form selected from the group consisting of an aerosol spray, pump spray, cream, emulsion, solid, liquid, dispersion, foam, gel and powder.

20. The composition of claim 13, wherein said at least one bacterium is selected from the group consisting of *Lactobacillus acidophilus*, *Bifidobacterium bifidum*, *Lactobacillus rhamnosus*, *Enterococcus faecium*, *Bifidobacterium adolescentis*, *Lactobacillus plantrum*, and any combinations thereof.

21. The composition of claim 13, wherein said at least one ingredient is flavonoid and pectin, and said optional pharmaceutically acceptable carrier is water or aqueous system.

22. The composition of claim 13, wherein said at least one ingredient is flavonoids, pectin and at least one enteric bacterium, and said optional pharmaceutically acceptable optional carrier is a solid or liquid selected from the group of water, aqueous systems, alcohols, polyols, glycols, mineral oils, vegetable oils, excipient, binder, powder and any combinations thereof.

23. The composition of claim 13, wherein said flavonoid is citrus flavonoid, said pectin is pomace pectin, and said at least one bacterium comprises a bacterium selected from the group consisting of *Lactobacillus acidophilus*,
- 5 *Bifidobacterium bifidum*, *Lactobacillus rhamnosus*, *Enterococcus faecium*, *Bifidobacterium adolescentis*, *Lactobacillus plantrum*, and any combinations thereof.
24. The composition of claim 13, wherein said flavonoid comprises at least one flavonoid selected from the group consisting of: rutin, hesperidin, naringin, naringenin 7-B rutinoside, flavonols, flavones, phenolics, and any combinations thereof, said pectin is apple pectin, and said at least one bacterium comprises a bacterium selected from the group consisting of *Lactobacillus acidophilus*, *Bifidobacterium bifidum*, *Lactobacillus rhamnosus*, *Enterococcus faecium*, *Bifidobacterium adolescentis*, *Lactobacillus plantrum*, and any combinations thereof.